



NHS

AMBULANCE **HART**
Hazardous Area Response Team

Edition 5

Summer 2010

INSIDE

HART



First National HART Conference

INNER CORDON 2010

The 1st Hazardous Area Response Team Annual Conference

Thursday 10th & Friday 11th June
BT Convention Centre, Liverpool



www.ambulancehart.org



Russ Mansford,
Strategic Ambulance
Advisor to the
Department of
Health and HART
Programme Lead.

THE FIRST NATIONAL HART CONFERENCE

Welcome to the summer issue of Inside HART, an edition of our magazine that coincides with Inner Cordon 2010, our exciting, first ever national conference and exhibition focusing on the progress of Hazardous Area Response Teams in England.

We have been planning this event for over a year and the final programme looks first-rate, with top class speakers, a packed exhibition hall and around 250 delegates lined up to enjoy what should be an excellent conference. HART has long had interest from abroad and we will also have international guests and speakers on board, including some high profile people from the emergency planning world in the USA.

I would like to thank all of the exhibitors and sponsors who have contributed to make this event possible and I would urge readers who are coming along as delegates and visitors to explore the exhibition hall fully – there will be some excellent suppliers and products on show and you will be able to see all of the equipment and vehicles that HART teams use. Remember it's free to visit the exhibition!

I would also like to make a special mention of our main event sponsors Excelerate Technology, who have the main stand at the show - look

out for the joint-presentation from their Chief Executive David Savage and our West Midlands HART Manager James Price, which promises to be very interesting indeed.

In this issue you will see the range of specialist jobs that HART is attending every day. The East of England and North East HART teams went live in April, which means we are now live there as well as in London, Yorkshire, the North West, West Midlands, and East Midlands. South East Coast and Great Western ambulance service areas go live in July, whilst South Central goes live in January 2011. This is tremendous progress and adds significant resilience to the country's emergency preparedness infrastructure, especially in readiness for major mass casualty events.

Our close training and working with fire and rescue services is really paying dividends as HART operatives and fire-fighters get to know more about each other's work, the terminology

each uses, the resources and the capabilities of each team. This is vital for effective working during a response and we are learning more from each other each day – all to the benefit of patients and the public. It is extremely encouraging that a sizeable number of the delegates at the conference will be representatives from fire and rescue services across the UK, keen to learn more about HART and to have input.

Hopefully I will meet some of our Inside HART readers at the conference and for those of you who cannot attend – please make sure you subscribe to the magazine (email my colleague carl.rees@londonsea.com for free subscription) as there will be a report on the conference in the autumn edition in September.

Best wishes for a peaceful summer.

Russ Mansford.

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London Ambulance Service hosts HART Awareness Seminar

By Colin Pinnington, LAS HART

On April 22, London HART held an awareness seminar covering the topic of Carbon Monoxide Injuries. This new concept is to have a repeatable format that only requires a change in topic to produce a fully structured seminar.

The sessions are open to all London Ambulance staff including control and officers, staff from other ambulance trusts, personnel from the London Fire Brigade's specialist CBRN Rapid Response Team and officers from The Metropolitan Police's dedicated CBRN Unit. This inaugural seminar's topic was Carbon Monoxide Injuries and after a brief introduction to London Ambulance HART the floor was handed over to a senior member of staff from Whipps Cross Hyperbaric Unit who gave an hour and a half presentation on the topic. This was then followed by an overview and update of the national and local Carbon Monoxide projects from Andy Humber, a Supervisor with London Ambulance HART.

Staff were also introduced to the equipment that London Ambulance HART have at their disposal to provide protection and monitoring for HART staff and the staff of the service. The pros and cons for each type were covered giving staff from the wider trust an awareness of what the "little boxes" that we have at calls are all about and how they provide an important protection function for both themselves and us as a team. The seminar then finished off with a 'no blame' case study of a Carbon Monoxide call that London Ambulance HART had attended and made a difference to patient outcome. The case study showed how benefits were achieved by HART working alongside London Fire Brigade's CBRN Rapid Response Team, which enabled faster extraction of the patients concerned from the hot zone. These patients were then transferred to Whipps Cross Hyperbaric Unit direct - speeding up treatment delivery.

Each member of staff that attended the afternoon received a certificate of attendance for their Continued Professional Development portfolio.

COVER SHOT:

HART teams from London and Yorkshire at work on a London Fire Brigade training course at Lincolnshire Fire and Rescue Service's USAR Training Centre, February 2010.

EAST OF ENGLAND HART TEAM UNDER THE SPOTLIGHT

The East of England Ambulance Service introduced its new Hazardous Area Response Team (HART) to the world in May when it hosted an extremely successful media launch at its Welwyn Garden City station.

Local newspapers attended and watched a rescue scenario put on by the team which appeared on various websites later in the day. The local TV station (Anglia/ITV) attended and ran an interview with team members and HART Manager Steven Moore in the evening.

Hayden Newton, Chief Executive of East of England Ambulance Service said:

"We appreciate the significant investment that's been placed into these resources for this Trust from the Department of Health and we remain one of the most well prepared in the country to respond to large and serious incidents. My thanks also go to the managers and staff of the HART unit for their commitment and enthusiasm to this exciting but necessary project."



Since its operational launch on April 19, HART has responded to a number of HART specific incidents across the East of England, some of which can be seen in the 'HART teams in action' section of this magazine. The HART team has also responded to many life threatening '999 Category A' emergencies since becoming operational.



HART HAUL FOR HAITI



The North West Ambulance Service's HART team joined forces in March to pull an emergency ambulance for one kilometre in under 20 minutes in aid of the Haiti Appeal, following the devastating earthquake in which thousands of people lost their lives and left thousands more injured and homeless.

Their efforts are expected to raise £1000 to go towards the emergency appeal.

The pull took place on a runway at BAE Systems in Balderstone on Thursday 25 March 2010. Leading the team was HART Paramedic, Ian Hepburn who said, "After watching news reports on the devastation caused by the earthquakes, myself and my colleagues got together to discuss what we could do to help."

"We understand the importance of having hygiene kits and medicine to prevent further, unnecessary deaths through disease, and we hope that the money raised will go some way to help with the massive challenges the people of Haiti now face."

Donations can be made by visiting www.justgiving.com/HARTEAM

HART TEAMS IN MAJOR NATIONAL RESILIENCE EXERCISE

In February 2010 HART teams were invited to take part in a major, national three-simultaneous-incident field exercise as part of the Fire and Rescue Service's National Resilience Programme.

The exercise involved a significant urban search and rescue response (a simulated train crash at Long Marston in Warwickshire), an explosion causing a building collapse (at the Fire Service College, Gloucestershire) and an incident involving numerous vehicles in the Mersey Tunnel in Liverpool.

The fact that all three incidents were happening simultaneously was designed

to test the emergency service response under significant, realistic levels of pressure nationally.

HART team representatives from London, East Midlands, West Midlands and South East Coast ambulance services joined fire and rescue services from Avon, Devon & Somerset, Buckinghamshire, Leicestershire, Kent, Gloucestershire, Hampshire, Hereford and



Worcester, West Midlands and Warwickshire at the train derailment at Long Marston.

At the Mersey Tunnels exercise, the North West HART team joined personnel from Mersey Fire and Rescue and colleagues from other regional fire and rescue services.

At the Fire Service College, HART teams from East of England and London joined London Fire Brigade to handle a large scale building collapse.

Gary Donald, HART Fire Services Liaison Officer, was present at both the Fire Service College and Long Marston over the weekend.

He says: "It was highly beneficial for so many HART teams to join such a large number of fire and rescue service personnel in what was a significant test of national resilience. There were a lot of lessons learned over the weekend that can assist HART in working more effectively with fire and rescue services in the future."



HART IN NEW ZEALAND

Andy Parr, Head of Emergency Preparedness at South East Coast Ambulance Service made a flying visit to New Zealand recently, during which he made two visits to the New Zealand Ambulance Service in Christchurch (South Island) and the Headquarters in Auckland (North Island).

Andy is pictured here with Graham Ferguson (Emergency Planning Manager at New Zealand Ambulance Service) whilst in Auckland handing over a copy of our very own 'Inside HART' magazine!

Says Andy: "The visit was very useful and we have agreed to set up an 'Emergency Planning e-Sharing' arrangement for the sharing of documents and experiences. I was also careful to ensure I left a good supply of Inside HART magazines as well as copies of the various HART DVDs we've produced!"



HART IS GENERATING SIGNIFICANT INTERNATIONAL INTEREST

HART DEPLOYS IN DISASTER CITY USA!

By Simon Watson of NWS HART

On April 23, four members of North West HART met up with six staff from Merseyside Fire & Rescue Service USAR team, to travel to Texas. They were to take part in a 48 hour exercise in 'Disaster City'.

"We arrived in Texas at 20.30 local time on Friday evening. Having been shown to our hotel it was a quick bite to eat and heads down for we were told it would be an early start. At 06.00 we were taken to 'Gateway', the headquarters for the Texas Task Force. Here we were expecting a tour of their facilities; however, the plan was quickly changed. We were asked to undertake the initial health check that all participants have to undergo prior to taking part in the exercise. Straight away we all felt part of the team and fully engaged in the exercise.



Chris Davies & Dave Berry performing initial health checks.

HART and Fire were then assigned into individual teams, along with members of the Texas Task Force and were taken to Disaster City, a 52 acre world renowned training facility set up as a mock community featuring full scale, collapsible structures designed to simulate various levels of disaster and wreckage.

The scenario given was a number of building collapses and multiple casualties owing to a vehicle borne Improvised Explosive Device (I.E.D.) Merseyside FRS USAR were deployed as a recce team to feed vital information back to the coordination centre. This information allowed key priorities to be decided and teams to be deployed where required.



Awaiting the extrication of the first of five casualties



Aerial view of Disaster City

The types of incidents dealt with included:

- Structural collapse
- Search operation
- Confined space rescue
- Mass casualties
- Triage
- Clinical intervention/stabilisation
- Hazmat
- Evidence preservation
- 'Man Down'
- Media presence

HART were involved in all aspects of the exercise, and were fully integrated into a multi-disciplined team with an international background. It was great to be comparing different ways of working and also hearing similarities in practices.

The exercise ran for two days with a debrief on the Monday. The team had the rest of the day off to visit a local mall and buy gifts for people back home.

On the Tuesday we made our way back to the airport to start the long journey home. We wouldn't land until early Wednesday morning.

We had differences in terminology, carry alternative medications and use different equipment, but the overriding message from the trip was the ease at which HART fitted into the larger team. There were rescuers from around America, Canada and the UK.

Doctors, paramedics, Fire & Rescue Services, Search & Rescue Dogs and engineers worked together to achieve all challenges put before them. The trip was a complete success and relationships formed that will benefit HART as a whole."



NWS HART, Merseyside FRS & London FRS

Teams involved in the exercise came from around America, Canada & the U.K.



AMBULANCE HART
Hazardous Area Response Team



"You say HART we say SORT"

By Jim Dickie, Resilience Manager, Scottish Ambulance Service

The Scottish Ambulance Service has three full time Special Operations Response Teams (SORT). The Teams are based in Glasgow, Edinburgh and Aberdeen.

Collectively the three Teams form the Special Operations Response Division, which is managed by the National Risk & Resilience Department (NRRD). The Teams were originally created in 2002, following new funding from the Scottish Government Health Directorate. The purpose of the Teams was to develop an enhanced CBRN and major incident response capability for the Scottish Ambulance Service.

Like the HART Teams, each SORT Team is made up of forty two (twenty two in Aberdeen) experienced Ambulance Paramedics, Technicians and other Support personnel. Since the Teams were developed they have been involved in a number of high profile major incidents, such as the Stockline plastics factory explosion and the terrorist attack on Glasgow Airport, and on average, attend over 500 Pre-Determined Attendance (potential major incident / special incident) emergency calls each year. In addition SORT participates in a significant amount of training and exercising with our partner organisations. The Scottish Ambulance Service has considered re-branding Scottish SORT to Scottish HART but have decided to retain the name SORT as this term is already familiar with our emergency services colleagues across Scotland and effectively describes the role of the Teams. For practical purposes, Scottish SORT is the same as English HART.



During the creation of the SORT Teams a number of concepts and innovations have been developed by the NRRD, with selected commercial partners, which are now used across the United Kingdom Ambulance Services. A good example of this is the Multi-patient Oxygen System used by SORT and HART, another is the Polaris 6x6 utility vehicle. Much of the early work on clinical decontamination training also originated with SORT and SORT pioneered training ambulance paramedics in Swift Water Rescue.

Following this initial investment from the Scottish Government the Scottish Ambulance Service submitted a number of business cases to enhance the existing SORT capability to the same standard as the Department of Health HART programme to allow an inner cordon capability to be developed.

The Scottish SORT Teams are in the process of developing their knowledge and skills further to enable them to operate with partner agencies inside the inner cordon of serious incidents. Extensive training is being undertaken to ensure compatibility with HART. In addition to standard ambulance/paramedic training, SORT personnel undertake a five week training course to enable them to operate in CBRN or other Hazardous materials environment using a range of specialist Personal Protective Equipment (PPE). Some of this training, specifically the Incident Response Unit course and Breathing Apparatus course, has been developed and delivered in partnership with the HART training faculty at the Defence CBRN Centre in Winterbourne Gunner and the Scottish Fire Services College at Gullane.

The intensive training programme includes the following elements:

Incident Command Training

- Operational and Tactical Command training
- CBRN Operational Command training

Safety Training

- Risk Assessment for Emergency Responders (RAFER course)

Ambulance CBRN Responder Training

- Training includes decontamination procedures

Specialist Personal Protective Equipment (PPE) Training

- Powered Respirator Protective Suits (PRPS)
- CBRN Quick Don PPE (QDPPE)
- Self Contained Breathing Apparatus (SCBA)
- Gas Tight Chemical Protective Suits (GTCPS)

Incident Response Unit Training

- A two week Scottish Ambulance Service Inner Cordon course covering clinical and non clinical areas. This course has had a significant amount of external subject matter expert input e.g. Threat briefings, Forensic awareness, Defence CBRN medical services, Explosive Ordnance Disposal and Defence Science & Technology Laboratory (DSTL)

Off Road Driver Training

- A three day professional off road course covering Land Rover and Polaris driving techniques





Like HART, the SORT Teams are focused on bringing care to the patient. The aim of SORT is to offer care to patients wherever and whenever they need it by increasing the footprint of ambulance care into challenging and hazardous environments, including those situations within which no care or ambulance support was available previously, with the aim of saving more lives and improving health outcomes for patients. This in turn will enhance the overall multi-agency response to incidents of this nature.

The Scottish Ambulance Service will declare an operational inner cordon response capability from August 2010. A launch day is currently being developed to promote this. Robust policy and procedures are currently being finalised which will dovetail with the Scottish Fire & Rescue Service, Police and HART procedures.

The Scottish Ambulance Service look forward to working in partnership with HART, the Fire & Rescue Services, Police Services and other responders to ensure a joined up approach to bring care to the patient where they need it, when they need it.

For further information please contact
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0131 344 5678 or
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Dr Dave Sloggett
Visiting Lecturer at the
HART Training Faculty

THE DYNAMICS OF THE TERRORIST EVENT: UNCERTAINTY, UNPREDICTABILITY AND CHAOS

"History has a knack of repeating itself. Winston Churchill once observed that those who fail to learn from history are doomed to repeat it" - Dr Dave Sloggett

The problem that we often see is that despite saying we will learn our lessons from the past we rarely seem to actually achieve such a state of nirvana; which is rather surprising and something the general public do not readily understand or forgive. Given the serious, agile and enduring nature of international terrorism today this is a situation that really needs to be addressed in training and simulations to ensure that lessons from past incidents are built in to ensure that some of the vagaries of the nature of terrorist events are understood by those charged with the protection of the public.

The random nature of the ways attacks unfold is a crucial aspect of the way in which responders must be exercised to ensure they are agile enough to cope with a real event. Their random nature complicates the response and gives advantages to the terrorists. Attacks upon the emergency services should also not be ruled out to dislocate their responses to an event. When planning exercises it is vital therefore that random variations in timing and scale of the effects be built into the simulation of the attack. Scenarios that do not exhibit elements of randomness will fail to prepare people for real events. Where scenarios are developed that are aimed at focusing upon the procedural aspects of responding to an event a form of *uninformed complacency* can arise where planners feel they have covered the bases by preparing people to enact the process. Whilst the process of the response is important the agility to cater for the unexpected is even more important.

Al Qaeda certainly believes in returning to tried and tested approaches to committing mass murder. This, however, can be dangerous for those seeking to assure a level of preparedness for responding to such events. Patterns can be seen to emerge that can be used to model the way that future events may unfold; forgetting the random nature of elements of ways in which attacks develop. An often quoted

signature of Al Qaeda's style of attacks is for synchronised detonations of devices in a short time period; creating a form of time compression. This tactic is in widespread use at the moment in Iraq, where Vehicle Borne Improvised Explosive Devices [VBIED] are often detonated across the capital Baghdad in an orchestrated series of attacks.

However it is too easy to quickly stereotype such an attack. In London on the 7th of July 2005 the three initial bombs on the Underground were carried out at 08:50. The fourth bomb, which detonated on the London bus at Tavistock Square occurred 57 minutes later; a factor that complicated the response as the first wave of bombs on the Underground appeared to have finished.

The railway attacks in Madrid and London and the failure to press ahead with their planned attack on the New York subway in 2003 using the *al-Mubtakkar* device all highlight a long-term interest by terrorist groups in attacking mass transportation systems. The New York attack was apparently in an advanced state of preparation when it was called off in the spring of 2003 by Al Qaeda's second in command Ayman al-Zawahiri. The reasons behind this decision remain unclear. At the time two quite distinct rumours spread. The first opined that the decision was motivated either by a lack of guarantee that the attack would raise the bar of just under 3000 people set on September 11th 2001. The second speculated that another even more devastating attack was imminent and that the New York attack might compromise the chances of that succeeding.

The *al-Mubtakkar* device is a very simple form of CBRN weapon that would disperse hydrogen cyanide that can be created with a small amount of explosives and some potassium cyanide and hydrochloric acid and potassium permanganate. Recent open source reporting has suggested that the periodic spasms of interest in the use of such devices have again reached a peak with evidence emerging in Iraq and in cyberspace of groups experimenting with the design of the device. Its utility in potential terrorist attacks upon bars and restaurants, theatres, shopping malls and places of entertainment has often been the subject of speculation in cyberspace.

Whilst London and Madrid were slightly different the outcome in terms of the ratio of people that died and were injured in the



incidents, were not that different. In London 52 people died from 4 events, a ratio of 13:1 and a reported 775 were injured; giving a casualty rate of approximately 200:1. In Madrid the death total was 191 from ten bombs that were detonated from 13 that had been planted; a ratio of 19:1 for fatalities and with over 1500 casualties a not too dissimilar rate of 150:1 for the casualty to blast ratio.

The attacks carried out by extremists on the railway system in Mumbai in 2006, where six out of seven bombs were detonated, resulted in a fatality ratio of 35:1 and a casualty ratio of 120:1 do not provide radically higher fatality or casualty ratios than those events in London and Madrid. The higher fatality rate experienced in Mumbai is clearly a reflection of the specific circumstances prevailing in Mumbai at the time of the attack. The enduring factor in all the attacks is the death at the scene of those immediately close to the source of the original blast.

All three events saw critical mortality rates of between 15-25%. These figures provide some basis for clinical planning as an event unfolds depending upon the nature of the event and the likely casualty arrival rates into the accident and emergency facilities. Time of day of the attacks will also be a factor; but it can be assumed that any terrorist group that has undertaken even a simple amount of planning will be trying to synchronise its efforts with known patterns of behaviour of travellers. In all of the three cases cited the attacks coincided with rush hour.

These death tolls are mild in comparison with some that we have seen emerge from the kind of contemporary Vehicle Borne Improvised Explosive Devices [VBIED] that have been employed in Iraq recently; where the ratio of



deaths to car bombs is between 30: 1 to 40:1. Despite the awful nature of these events, where many are killed very quickly due to their close proximity to the detonation, those that are evacuated to hospital care do seem to be benefit in terms of their survival rates.

This is all very interesting when it comes to conventional terrorist attacks. The CBRN world, however, would be very different. The Tokyo sarin gas attack, conducted on the morning of the 20th of March 1995, at the peak of the rush hour, is the iconic CBRN event from which we can learn some lessons from history. Whilst the immediate death toll on the day was amazingly low, with 8 initial deaths and 4 in the immediate aftermath, the long-term consequences of the care and rehabilitation of the people exposed to the gas is a significantly different problem. On the day 688 people were taken to hospital and approximately 4000 people also self-presented to medical centres complaining of symptoms. These were the so-called well unwell that plague hospitals and care centres in the wake of such major events.

The scale of this facet of the aftermath of an event can be truly enormous as events in Goiânia in Brazil on the 13th of September 1987 highlight when over 120,000 thousand people self-presented to the Brazilian National Health Service in the immediate aftermath of an event where people became exposed to caesium chloride. For hospitals planning a response to any major CBRN event the speedy assessment of individuals self-presenting is an essential element of any response that seeks to deliver treatment to those really in need.

It is important to remember that the sarin gas used in the Tokyo attack had been diluted; its

concentration was close to 30%. Had a fully concentrated liquid being used as the source of the gas the casualty totals would have been significantly higher. It is also important to recognise that in each of the five separate incidents that comprised the overall event the way the attacks actually panned out was very different. The lack of a concerted response to the attack complicated the problem. The perpetrators had used sarin gas a number of months before in an attempt to assassinate some judges who lived in a suburb of Tokyo who were sitting in judgement on a land dispute involving the Aum sect. On that night 7 people died and over 500 were hospitalised; but the warnings and lessons learnt from this event were not heeded.

The failure to take the trains out of service after the attacks, had started to contribute to an increased number of people being exposed to the sarin gas. A number of the casualties involved were emergency responders who were unprepared and lacked knowledge of how to deal with such a scene. The failure of the train authorities to act brought a greater burden to bear upon the hospital authorities in dealing with the dynamics of the event. Terrorist events by their nature are unpredictable. Tokyo showed just how unpredictable they can be and is an event that we should never lose sight of in our planning for emergencies and exercising together.

Whilst it is important to understand the dynamic way in which events can unfold, and to train accordingly, we must also recognise that terrorism mutates. The November 2008 attacks in Mumbai and the follow on events which can be likened to either Mumbai-Lite or Mumbai-Heavy attacks, depending upon the

targets chosen, illustrate that ability to take a step change in the nature of the terrorism.

The end game for organisations like Al Qaeda is the end of western civilisation. They want to perpetrate mass murder to ensure that our society, which they believe to be decadent, falters and gives in. Conventional terrorism can only be a stop game in what is a relentless effort being made by the terrorists to gain access to even greater means of achieving their aim. Conventional terrorism maintains support networks and ensures new recruits continue to be attracted to their cause. But, and this is important, it can never achieve the knock-out blow that CBRN related terrorism could achieve.

The nightmare that is a CBRN attack, with all of its attendant uncertainties and consequences, can never be forgotten. Complacency, and the idea that we are never going to be on top of a mutating terrorist threat, is our real danger, as is resignation that there wouldn't be much we can do anyway. There is a great deal that can be done to be prepared for such an event, but, we only have to fail once. That is not the issue for the terrorists. Were they to succeed, on that dreadful day, for many involved in responding to the events it will seem like walking through hell itself; as the responders try to cope with a chaotic situation that will evolve in unpredictable and challenging ways. Perhaps therefore it is appropriate to end this piece with another Churchillian masterpiece. *If you are walking through hell, keep going.* Now there is a thought for the motto for the HART teams. Whilst not quite as dramatic as *Who dares wins* it certainly conveys the sense of the determination that the HART teams will exhibit in conducting their activities should that dreadful day ever occur.



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HART FORWARD COMMAND V EMERGENCY COMMUNICATIONS

The UK Ambulance Service's national HART programme provides one of the best demonstrations of the ways in which an integrated solutions approach to advanced command communications will change radically the way emergency incidents will be managed in the future. The objective is to create a joined up digital incident ground, across which all emergency services can share a Common Operational Picture, thereby improving the effectiveness of response and saving lives.

As is now well known, to improve the way it can respond to major emergencies, such as CBRN (Chemical, Biological, Radiological and Nuclear) attacks and USAR (Urban Search and Rescue) incidents, the UK Department of Health and the Ambulance Service developed the national HART programme. The programme was designed to support paramedics operating inside the 'Hot Zone', the inner cordon of major incidents (something the ambulance service was not previously equipped to do).

To support the programme the HART project developed a number of specialist MIRVs (Mobile Incident Response Vehicles) which operate in sets of three (the Forward Command Unit, plus a reconnaissance unit and an equipment carrier). In total there will be fifteen teams deployed within England and two within Scotland. The Forward Command Units feature Excelerate Technology's advanced command, communications, data, video and coordination technologies for supporting paramedics in high-risk, high-pressure situations, such as CBRN attacks and rescuing casualties alongside fire and rescue and police service personnel in collapsed buildings and tunnels.

The Forward Command Vehicles' integrated communications, data, voice and video technologies were specifically prototyped, developed and tested for over a year by Excelerate in collaboration with the Department of Health and the Ambulance Service, to ensure the technologies used matched their exact requirements. This process was designed to explore options for providing command teams with the optimum combination of rapidly deployable communications, data access and live video infrastructure where none previously exists (or if existing infrastructure has been compromised and requires additional resilience).

Internal vehicle layout and positioning of screens, communications systems and computers were all trialled to achieve the best possible use of space for command vehicle crews and commanders working under high pressure. Where required, technology was specifically designed and integrated for operational requirements, such as the PBX intercom solution and the digital dashboard for simple yet effective communications and

monitoring of on-board systems.

Satellite broadband is one of the key technologies at the heart of this approach to improving single and multi-agency emergency management. It is the only effective type of solution available for delivering enough guaranteed bandwidth anywhere to run an increasing number of voice, data and video applications.

RapidNet Private GSM is also available for maintaining communications with field-based personnel when service from the main network providers is unavailable. The solution provides full, stand alone backup GSM telecoms capacity, thereby eliminating the risk of a repetition of the communications problems experienced following the 7/7 bombings in London, when networks overloaded by public usage collapsed. Private GSM enables secure and private access away from normal terrestrial networks, eliminating problems caused by congestion, security breaches and unavailability. For added resilience the HART units also have 3G Failover, to cover any eventuality should any of the systems fail.

When all three MIRVs from each HART team are positioned together they can create a wireless MESH network for enhanced communications, which can then be extended with Excelerate's wireless nodes, giving field personnel the ability to operate using ruggedised laptops and other wireless devices within a secure area.

COFDM body-worn cameras can also be deployed by HART personnel, allowing real time, on-the-spot video streams of an incident (even within building collapses and tunnel and underground incidents) to be viewed by commanders in the Forward Command Vehicle and on hand-held devices, as well as being streamed back to the control room via satellite broadband.

Driving the acquisition of all this new technology have been command objectives such as the clearly identified need for emergency service personnel to receive maximum command and communications support for doing their life saving work

efficiently, for personnel to be deployed using safe systems of work, and for the establishment and sharing of a Common Operational Picture across a joined-up, digital incident ground, for both single and multi-agency incidents (see graphic below).

The J A Guide to Rapidly Accelerate ground - satellite

Incident Imagery

Major incidents, often across wide areas and of long duration, place huge demands on emergency management organisations, either when working alone or, as is often the case, in partnership with other agencies. This high pressure environment can be made much worse if clear command communications are not set up and maintained within a very short period from the arrival of emergency services.

Excelerate Technology's proven solutions deliver communications support for the saving of life, the protection of property and resources, and the early re-establishment of business continuity through the optimum use of advanced integrated technologies supporting the sharing of a Common Operational Picture.

Body-Worn Camera

Excelerate supplies body-worn camera solutions that utilise a variety of transmission standards including COFDM, Wireless, GSM, and 3G to suit the purpose and levels of resilience required.

These deliver on-the-spot coverage and awareness to all relevant parties involved in an incident.



Body-Worn Camera



Command Unit equ

- 1 Wireless nodes to extend range for communication
- 2 Body-worn cameras with transmission facility
- 3 'Night Owl' lighting rig to illuminate the scene
- 4 CAMOS satellite dome for SKY television

VEHICLES DELIVER POWERFUL INFRASTRUCTURE

By
Stephen Prendergast



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HART TEAMS IN ACTION



EMAS JOINS FIRE & RESCUE SERVICE AT LARGE RECYCLING DEPOT FIRE

By Sid Murphy, EMAS HART Team Leader (Yellow Team)

East Midlands' HART (Yellow Team) attended a large fire at a plastic recycling depot in May, following a request from Leicestershire Fire & Rescue Service (FRS).

The whole team was mobilized from their base at East Midlands Airport and arrived on scene at 1510hrs. The smoke plume caused by the fire could be seen as we joined the M1 from a distance of approximately 20 miles.

Once on scene I liaised with the EMAS resources already on scene, a Double Crewed Ambulance and an Operational Support Manager, then introduced myself to the FRS Incident Commander and logged in with their Command Support Vehicle (CSU). The crew were then able to be released from scene to return to normal duties.

I was briefed on events so far and learnt that there were currently 12 Leicester FRS pumps, one Ariel Platform Ladder (APL) and Bowser on scene. They had requested a further two pumps from the surrounding area as well as asking for support from Nottinghamshire FRS. They were sending 2 pumps, an APL and a Fire Investigations Officer.

The fire was well underway on their arrival and it had been decided the building was unsalvageable; therefore their priority was to prevent the fire spreading to adjacent properties (one of which was a paint store). They had committed four crews in Breathing Apparatus (BA) and had approximately 55 FRS Personnel on scene.

Initially the scene was quite chaotic;

I grouped our HART vehicles near to the FRS command support unit but ensured it was not in the way. I gave a team briefing to the rest of Yellow Team and requested that 2 operatives remained on standby ready to deploy forward should the need arise. Two others set the Forward Command Vehicle and Incident Response Unit up, and continued the log I had started while travelling to scene. I assigned the remaining member of staff to position himself next to the FRS CSU, to act as a Liaison officer while I updated EMAS Control, the On Call Emergency Planning Officer and contacted the HPA. We were able to use the IT on the Command Vehicle to good effect and the FRS appreciated the images we obtained from Google maps and Chemet.

HART acted as the eyes and ears for the HPA and fed information back and forth between the incident site and the HPA advisor. The smoke plume was massive and had an acrid smell, and at times looked like it was going to drift over the M69. HART ensured everyone on site had Respiratory Protective Equipment.

As a result of the information I was able to pass on to the HPA they alerted the surrounding hospitals, NHS Direct, Out of Hours Doctor services and the wider PCT in relation to increased calls in the area in relation to Respiratory problems. An announcement was broadcast on local radio stations advising the public to stay inside and close all windows and doors.

We treated one fire fighter for a knee injury that occurred while he was tackling the blaze but in the spirit of the trenches we patched him up and sent him back in!

At 1900hrs the night Duty team (white team) relieved us and remained there until 0330hrs the following morning. During their time on scene there were several explosions from within the building which caused the FRS to evacuate the area before regrouping and redeploying.

We have had positive feedback from the FRS and the HPA for our conduct and assistance in this incident.



HART WORKING AT HEIGHT

During the afternoon of 4 May the East of England HART team was mobilised from its base to Hoddesdon, Hertfordshire, where a male had fallen approximately 2½ meters on to a first floor roof.

On arrival the HART team linked with the Ambulance and HEMS resources on scene who had started to deliver patient care. Working with the ambulance crew and HEMS team the patient was diagnosed with back and a head injuries.

The HART team worked with the Ambulance Crew and HEMS team to stabilise the patient in situ before agreeing a safe system of work with the Fire and Rescue Service to remove the patient from the roof to the waiting ambulance.

It was agreed the safest and most effective way of undertaking this was by using the HART mibs stretcher and spinal inserts to ensure the patient could be safely moved while keeping his back as still as possible.

Together with the Fire and Rescue Service the HART team lowered the patient to the ground where the ambulance crew were able to take over the patient care.

This close working relationship with the other emergency services allowed the HART team to effectively contribute to the effective patient care while at height.



MAN RESCUED AFTER FALL THROUGH CEILING

Paramedics, fire fighters and East of England HART rescued a man who fell through a ceiling on Monday, May 17.

The East of England Ambulance Service were alerted to a building in White Stubbs Lane in Broxbourne at 10.13am, to a report of a man who had fallen through a ceiling. Ambulance crews from Cheshunt and the HART team were dispatched to the scene. Due to the nature of the call, the Hertfordshire Air Ambulance also attended the scene.

HART Team Leader Lee Charles attended the incident and said: "The man was approximately 10 feet up when he received his unfortunate injury. We believe he was renovating a property when his leg fell through a plasterboard ceiling. Due to the injuries sustained, and his removal from a height, we required the Fire Service to assist us."

After two hours, the man was led to safety and placed in an awaiting ambulance and conveyed to the QE11 hospital in Welwyn Garden City. He sustained a fracture to his leg.

HART Training Manager Lewis Andrews said: "Today's incident went extremely well indeed. The HART team can now offer a new dimension of patient care at the scene of an incident like this one today. The team worked very closely with the operational paramedics and the fire service and the patient received the best care and treatment prior to his transportation to hospital."

HART TEAMS IN ACTION



CAR COLLIDES WITH SHOP

The West Midlands HART team played a significant part in the emergency response when a car collided with the front of a shop in Birmingham in May.

Three ambulances, two incident support officers, a senior paramedic officer, the Midlands Air Ambulances from Staffordshire and Cosford and paramedics from the Trust's Hazardous Area Response Team attended.

A West Midlands Ambulance Service spokeswoman said: "Crews arrived to find a car which had collided with the front of a shop, causing some of the building to collapse."

A pedestrian, a teenage boy, was trapped between the car and wall and had suffered serious abdominal and lower limb injuries. Crews worked to quickly release the boy with help from the fire service whilst he received pain relief and emergency treatment. Once freed, the teenager was fully immobilised with a neck collar, spinal board, pelvic and leg splint and flown to Selly Oak Hospital. Medics had been pre alerted to the arrival of the teenager who was in a critical condition.

A second pedestrian, a woman believed to be in her 30s, suffered serious injuries after reportedly being in collision with the car. Crews treated her at the scene and immobilised her with a neck collar and spinal board before she was transferred by land ambulance to City Hospital.

A further three patients were trapped inside the shop due to the structural damage caused in the crash. HART Urban Search and Rescue (USAR) paramedics, who are specially trained to work in such locations, entered the building along with assistance from the fire service to assess, treat and rescue the patients and bring them to safety.





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CBRN MATTERS

In this issue Inside HART meets Chris Perry who works alongside the HART Project Team at the Emergency Preparedness Division at the Department of Health, to find out more about his various related work streams.

Chris Perry

Ambulance Advisor
at the Department of
Health's Emergency
Preparedness Division

What is your current job title and what does it involve?

I've been Ambulance Advisor at the Emergency Preparedness Division for the past 15 months. The role involves working across government departments within the Home Office and the EPD on Chemical, Biological, Radiological and Nuclear (CBRN) matters, as they relate to the ambulance service. I also liaise closely with the Fire & Rescue service.

What other jobs have you done to qualify you for this role?

I worked for four years as a Royal Engineers bomb disposal operator, which taught me to deal with Chemical munitions. This certainly gave me a good grounding in CBRN to prepare me for future roles.

After the army, I joined the London Ambulance Service in 1978. I became a founder member of the CBRN decontamination team, thanks to my army experience.

While working as a sector training officer within the LAS I applied for a secondment to the police national CBRN centre at Winterbourne Gunner. There I taught multi-agency gold and silver command band training and also established the ambulance CBRN Single Point of Contact (SPOC) group.

The police centre moved to Ryton on Dunsmore and I went with them as part of a multi-agency team developing strategies and tactics for responding to a CBRN event.

How have your experiences helped you in your current job?

I think my previous jobs have enabled me to look at the whole CBRN issue from a multi-agency perspective, understanding how they all need to fit and work together. This helps in my job of explaining the health needs of a CBRN event to other agencies. It also helped me to identify the need for Ambulance Military Liaison Officers (AMLO), which didn't previously exist.

Can you tell us about your involvement with the Technical Response Force?

I'm the national co-ordinator for ambulance support for the TRF, run by the Ministry of Defence, which liaises with the police, military and health community. To strengthen this union, the Emergency Preparedness Division has created and funded a cadre of Ambulance Military Liaison Officers. They act in support of the health community and the TRF during a TRF



deployment. The AMLO's role is to explain the needs of the TRF to the health community before they arrive on scene and to support the TRF and ambulance commanders in understanding what each other's requirements and capabilities are.

What's important about AMLOs is they provide a known and trusted face, and we know people respond better with someone they know. It's an advisory, not a commanding role. AMLOs are regionally based, but have a national remit. All are security cleared and Silver trained CBRN commanders within their own trust. They provide support to the trust in developing plans and training for CBRN events, and especially the integration of the HART response, in fact a large number of HART managers are AMLO.

Tell us about the new course run by the ILO you're involved with.

I am the national co-ordinator for the national Inter-agency Liaison Officers (ILO) course for ambulance officers, run by the EPD and the Fire & Rescue service. The course for SC level security cleared ambulance officers is a 9-day residential at the Fire Service College, designed to give ambulance and fire officers a greater understanding of the roles and capabilities of agencies including HART and mass decontamination agency Detection, Identification and Monitoring (DIM) to support HAZMAT major incidents and counter-terrorism operations. The plan is that all AMLOs will do the course, as well as other managers nominated by trusts who meet the criteria, the department has funded five places per ambulance trust. It will allow trusts to support HART deployments in the event of a terrorist incident.

You've been involved in developing new radiation guidelines for ambulance staff – what benefits will these have?

Previously, ambulance staff worked to guidance on the same level as the public. The current

legislation indicated this was not appropriate.

A working group was set up to explore the changing needs of ambulance trusts (including HPA scientists, representatives from the Health & Safety Executive, ambulance staff and staff side representatives). New guidelines were put together to clarify health and safety issues, identifying safe radiation exposure levels for all ambulance staff that will enable them to discharge their duty of care to patients.

There are specific criteria for HART responders that will help them operate in radiological events in a safe way. Find the new guidance at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_114469

Tell us about the new Radiation Protection Supervisors now needed by ambulance trusts.

As a result of the guidelines, we now need Radiation Protection Supervisors in every ambulance trust to put these into practice and give advice to ambulance staff. The RPS becomes the point of contact for radiation protection advisors (RPA), who are employed by the HPA.

A new week-long course has been put together to train people for the RPS role, and is aimed at HART team supervisors, AMLOs and emergency planners. Funded by the EPD and run by the HPA Radiation Protection Division, it gives greater background knowledge on radiation and how legalities affect the ambulance trust.

The course includes practical assessments as well as theory and is assessed. If a participant is successful, it is up to the trust to appoint the applicant as an RPS, and to date all those who've passed the course have been appointed.

We've trained 40 RPS so far and have capacity for about 170. We need around 15 per trust to ensure resilience and give 24-hour support to staff and trusts.



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Kerri James
PR and
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DEALING WITH THE MEDIA

Technology and its instant access to the media, is now indispensable, playing an increasingly important role in everyday life. It has become the filter through which we view the world. Most people get their information from news outlets with their own agendas, political affiliations and ideologies.

So how should people within Emergency Preparedness and Resilience departments in emergency services view the media? How can they work together effectively in terms of serving their mutual interests in what are potentially traumatic circumstances for all concerned?

From the 1980s onwards, in the so called 'decade of disasters', major incidents often unfolded live on film, think of the Bradford and Hillsborough football disasters. Major transport incidents occurred where the media arrived on scene at the same time as emergency services. In light of the ever increasing media presence at major incidents, all emergency services now have their own press officers and have integrated guidelines into their resilience planning on how to integrate with the media, i.e. what information should be released in the event of a major incident and what shouldn't.

The noughties have become the decade of citizen journalism, ordinary people caught up in extraordinary situations. Nearly all mobile phones these days have in built cameras, and the development of technologies such as 3G and WiFi means news can be created by anyone, anywhere, anytime. For example Twitter, the micro blogging tool, was the first site to break news of the terrorist attacks in Mumbai in 2008, with people taking photos and posting them online in real time.

Handled well, the presence of the media at a major incident can be a useful tool for emergency services, as well as the local Health Protection Agency and Strategic Health Authority, to get important health messages to the public.

For instance, during a chemical incident, in which a cloud of possibly toxic dust is released into the atmosphere, messages to stay indoors can be relayed via the media to the local population. In the North East, we also have

NEIL the North East Information Line, to relay helpline numbers that have been set up for the public to check on friends and family rather than calling 999 and diverting precious resources away from those who need them.

However, the presence of the media can also potentially have a negative effect on the emergency service personnel working at the scene. Without proper control and containment, the media could jeopardise rescue efforts at the scene of a major incident.

It's also a recognised part of the job, that Ambulance Trusts in the UK have a duty to respect the dignity and privacy of their patients. It would be hard to maintain any privacy in the glare of the world's TV cameras.

Who can forget the haunting images of patients being brought up from Edgware Road tube station in the aftermath of the 7/7 attacks and photographed by citizen journalists in the back of an ambulance? Imagine how distressing it would be, unable to contact friends or family who may be caught up in the atrocities and seeing these images relayed across the world?

The media are also not infallible, sometimes making mistakes in the midst of chaos and tight deadlines, printing inaccurate information or 'exaggerating' facts to sell papers which could cause panic.

This is where a good relationship with the press and a well prepared media plan in the event of a major incident can hugely benefit the



reputation of an ambulance service. If the media trusts your organisation to be honest, and forthcoming with information, because of a good pre existing relationship, they are more likely to be receptive to publishing /broadcasting your public health information.

If a well prepared system of disseminating information from incident commander, to press officer, to journalist is established in a trust, it also increases the likelihood that post incident write ups will be more favourable. Public perception of the emergency response to an incident is largely determined by media coverage. For example during the emergency responses to 7/7 and 9/11 staff involved are often described as 'heroes' in the media.

It is vital that press officers strike a balance between trying to shape coverage, and letting journalists write a story that is free from pressure or imposed bias. Your reaction to the requests of journalists in a difficult situation is likely to shape your relationship for months and years to come.

The media can be beneficial to HART and other emergency services, if handled right. Handled badly it can muddy the reputation of your Trust and demoralise staff. The most important thing to remember is to be open, forthcoming and above all, prepared!



ACCESS ALL AREAS

Hilary Pillin is the HART Programme Manager and leads the Department of Health's HART Project Team which is chaired by Russ Mansford. Hilary's main objective is to ensure the smooth roll-out of all 12 HART teams by April 2011. Hilary lives in the East Midlands with her two young daughters.

Hilary Pillin,
HART Programme
Manager



Can you give us a brief potted history of your career to date in the NHS?

The majority of my career to date has been in NHS management since 1989, initially in the acute sector and then in the ambulance sector since 1996. I worked for Nottinghamshire AS, which then became East Midlands AS in 1999 and was Assistant Director for Corporate Services there when I took up a national role for the Ambulance Service Association in 2003. This was as National Coordinator for Health, Safety & Risk and for four years this kept me very busy working with all of the ambulance trusts (38 at that time!) focusing on national guidance and policy initiatives for risk management, governance and issues such as infection control, violence in the workplace, moving & handling, work-related stress. It was while in this role that I first got involved in the HART project in 2005. I am now an independent consultant and have been managing the HART programme as such since 2007.

What first attracted you to the HART programme?

Russ Mansford! He invited me onto the project in its early stages due to my national role and experience in risk and safety management. It was very obvious from the beginning that the role being looked at was taking ambulance personnel into hazardous and challenging environments and from the beginning our concern was that staff safety and wellbeing had to be paramount. It involves a very different way of working and requires people who are not only physically fit, but healthy and resilient in general – and of course, willing to work in such environments and as part of a team. One of my first priorities when I got involved was to introduce a robust recruitment and selection process – to ensure we got the right people for the job and also that they knew exactly what the role entails and what would be expected of them before they applied. Another priority was to introduce a comprehensive and independent evaluation and monitoring process. We were all very conscious we were starting with a blank sheet of paper in developing the concept and we needed to be sure that every aspect of it was fit for purpose – the PPE, equipment, operating procedures, clinical protocols, training, vehicles, multi-agency working and of course, the people. We also wanted to be sure whatever we introduced was going to add value to patient care and so ongoing monitoring as the teams become operational is vital.

So you were involved from very early on in the HART project – how did it all begin?

Once we had the ministerial mandate to develop this capability, in the early stages of the project we were concentrating on

designing what we thought the 'end-product' needed to be and all the component parts that would be required to produce this. We combined 2 separate projects – the CBRN 'Hot Zone' response and USAR – into the one HART project and these have quite different operational requirements, so the challenge was to make sure we had every angle covered and that it all dovetailed together. Our first pilot sites went live as partial teams in 2007 in London (CBRN) and Yorkshire (USAR) and they really became our testing ground from which we learnt a great deal and we made many changes as a result. This led on to a programme rolling out 12 full teams deploying both capabilities – and we are building on those capabilities as we go, this year introducing Inland Water Operations and also Maritime response.

What are the main aspects of your job and what are your key objectives?

Once the roll out began, it was clear there was a need for coordination of not just the continuing development of the concept but effectively 12 separate projects in 10 ambulance trusts. I took on the role of programme manager in April 2007 and it has been really exciting seeing this seed of an idea grow into fully fledged teams. Our initial objective was to have all 12 teams running by March 2010 but this was delayed for a year whilst funding issues were sorted out. We now have 7 teams fully operational with another 2 going live in July, and then the last 3 early in 2011.

You are part of the central HART project team based at the Department of Health. What is this and what does it do?

For the size and extent of the project, we have a very small team of people engaged in making it happen, though the central coordination of the various functions is critical. You can see the team on the back page of this magazine and each has a vital part to play in ensuring HART is delivered effectively and efficiently and that we support each of the Trusts implementing HART in whatever way necessary to bring it to fruition and most importantly, make it sustainable.

What would you say are the three most successful things the HART project team has done so far?

I think firstly THE most successful thing we managed to do was to secure the central funding to support the programme and the recurring funding to continue HART in the future. The fact that we have been able to centrally manage the distribution of the funds as the project developed and teams rolled out is unusual for DH initiatives but has been absolutely critical in enabling us to deliver our objectives. I think we would have a very

different and messy picture today if we hadn't been able to do this from the centre. Secondly, we have developed HART as a national standard – this is essential because it is part of a national response capability – the teams need to be able to work together seamlessly wherever they are in the UK. We only have 12 teams so far in England (with similar capabilities being introduced in Scotland, Wales and Northern Ireland to the same standard) and in the event of a mass casualty or large protracted incident effective mutual aid will be critical. Thirdly, we have developed a capability that is the envy of other countries trying to address the same issues as ourselves. We have excellent national training programmes, state of the art technology and highly motivated & skilled HART teams who have demonstrated their worth in many arenas already and I think everyone involved, especially the HART personnel themselves can be very proud.

By the way – with just 3 teams fully operational from April 2009 and 2 more that went live in September 09 – HART attended 2,072 IRU (CBRN) incidents and 373 USAR incidents in the last financial year. I want to dispel the myth that they are sitting around waiting for bombs to go off – they are busy people!

What have been the main challenges you have faced in rolling out HART?

We have had many sticking points and hurdles to get over, but that is to be expected in a programme of this nature. I have to say, coordinating roll out across 10 independent organisations each with their own demands, priorities, personalities and cultures has been an interesting challenge – a bit like herding cats whilst swimming in treacle with one hand tied behind my back at times; trying to keep everyone moving at the right pace and in the right direction, but on the whole everyone I have worked with has been motivated and positive throughout and somehow we have kept the momentum going.

What factors will affect the long-term success of the HART programme?

The main factor will be strong leadership, with real support from Trust Boards. There has been significant investment (time, money and people) put into getting HART established and performing effectively. It represents a brand new asset for them which they need to nurture and protect as their role becomes embedded in day to day activities. It adds an additional step in the patient care pathway, getting to patients in areas we couldn't safely access before. It provides Trusts, as Category 1 responders under the CCA, with an enhanced capability to save lives in the event of civil emergencies including terrorist attacks.

Continued on Page 20

THINKING OF JOINING THE HART TEAM?



If you're considering joining the HART team in your own NHS ambulance trust, visit the recruitment section of the www.ambulancehart.org website.

You will be able to find out about the application process and see more about what the job entails. Please note, to be eligible to apply you will need to have at least 3 years current ambulance operational experience.

You can also use the website to sign up to the regular HART e-newsletter.

Send your letters and feedback about HART, and any corrections concerning Inside HART to carl.rees@londonsea.com
Your feedback is greatly valued!

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ACCESS ALL AREAS CONTINUED FROM P19

Ensuring they remain prepared and available is therefore vital for that and CEOs are the accountable officers for making sure they are able to perform on the day. But if these personnel get sucked into mainstream core operational response there is a real danger that HART will become diluted, unable to deliver as a national capability, and these highly motivated and dedicated personnel will begin to question their role and value. The funding has been secured over and above core business to ensure that HART is maintained as HART and so there really shouldn't be an issue, but as we all know, the pressure on operational performance and funding is always there. The long-term success is therefore going to be heavily dependent on firm and supportive leadership, along with clear commitments from trusts and commissioners alike, to maintain the national response capability and allow HART to operate as it has been designed to do.

What is your vision for the future of HART?

I think the vision has to come from the Department of Health together with the Trusts themselves as we all learn how HART contributes and adds value and how it can operate increasingly effectively. There is certainly potential for it to grow and morph as we learn and as the context in which it operates changes. Central functions will need to continue to be provided, such as training, procurement, SOPs, research and monitoring –

it simply wouldn't make sense for each Trust to try and do these things individually – not only would it not be efficient use of resources, but it would also threaten the maintenance of HART as a national standard. HART also has to be ready to adapt for any changes to the national risk profile and in the threats that face the country, and development for that will need to be managed in a highly coordinated way, working with our partner agencies.

Anything else to add?

I would like to add some thank yous. When we started in 2005 our early multi-disciplinary / multi-agency working groups were very large indeed as there was so much ground to be covered and many stakeholders and subject matter experts that needed to be involved. As the different project components came together and became tangibles, these large groups began to shrink and people inevitably faded into the background. I don't think we have ever had the chance to properly thank everyone that put so much into the development of HART at the beginning – they know who they are and they really should take great credit for building the foundations of what we have today. I would also like to thank the team I have working with me today and that includes all of the HART Managers. We often comment on what a positive, 'can-do' group of people we are lucky to work with and it makes working on this programme a very rewarding experience. **So thank you all!**

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– (also available on the HART website)
- **So You Want To Join HART?**
– aimed at potential HART team members
– (also available on the HART website)

USEFUL HART CONTACTS



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